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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,768	07/12/2001	Masaru Kogure	32405W085	9583

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EXAMINER

LAVIN, CHRISTOPHER L

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/902,768

Applicant(s)

KOGURE ET AL.

Examiner

Christopher L Lavin

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 and 4 is/are allowed.
- 6) ☒ Claim(s) 1, 3 and 5 is/are rejected.
- 7) ☒ Claim(s) 1 - 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09902768, filed on 07/12/01.

Drawings

2. The drawings are objected to because figures 6, 9, and 11 require corrections. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. With regards to figure 6, the yes and no arrows for step S10 appear to be reversed. When the line is reliable the method should count down, not count up.
4. With regards to figure 9, "32-TH Monitoring Area" should be replaced with "32-ND Monitoring Area".
5. With regards to figure 11, "Amax" and "Var" should be followed by apostrophes to symbolize that they are normalized or the drawing should in some way inform the reader of the normalized results.

Specification

6. The abstract of the disclosure is objected to because of a typo. On the sixth line of the abstract, "when d fail-safe" the "d" should have been an "a". Correction is required. See MPEP § 608.01(b).
7. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms, which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are:
8. The paragraph starting on page 1, line 18 is nearly incomprehensible and needs to be rewritten.
9. On page 2, line 20, "mages" should be replaced with "images".
10. On page 3, line 5, the final portion of the sentence is grammatically incorrect and confusing.

11. Throughout the document, the word "traveling" is misspelled "travelling" for example on page 3, line 19.
12. Throughout the detailed description, many of the figure numbers are incorrect. Several examples include: page 4, line 8 "FIG. 1" should be "FIG. 4"; page 11, line 34 "FIG. 7" should be "FIG. 10"; page 12, line 37 "FIGS. 9A and 9B" should be "FIGS. 12A and 12B".
13. Throughout the document, the word "tires" is misspelled "tyres" for example on page 4, line 13.
14. Starting on page 17, line 30 the variable "VAR" is renamed "VTR" this should be corrected.

Claim Objections

15. A substitute claim sheet in proper idiomatic English and in compliance with 37 CFR 1.75(a) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter. Following are several examples of the poor grammatical form of the claims:
16. The first claim is a run on sentence lacking any punctuation to help the reader understand the claim. It also lacks a clear and well defined preamble.
17. In the second claim it is hard to understand what the phrase "and the number of luminance edges" is connected to in the overall sentence.
18. In the third claim the phrase "include parameters" is redundant.

Claim Rejections - 35 USC § 102

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

19. Claims 1 and 5 are rejected under 35 U.S.C. 102(a) as being anticipated by Akita (6,282,478).

20. In regards to claim 1, Akita discloses in figure 2 a front-view monitoring system for taking fail-safe measures. Akita further discloses, in figure 4 described in the paragraphs starting at column 15, line 58, a parameter with a first period (see the sentence starting at column 16, line 36 for an example of the period) used to determine if a fail-safe measure should be taken. Akita later discloses, in figure 6 described in the paragraphs starting at column 17, line 64, a second parameter with a second period (see the sentence starting at column 18, line 66 for the second period) used to determine when to turn off the failsafe parameter.

21. In regards to claim 5, all but the final portion of claim five, "the first period being variable in accordance with an accuracy of a lane marking on a road in the monitored image is recognized" has been rejected in claim 1. Akita discloses in figure 4 a system where the length of the first period is determined in part based on if the lane was properly detected, which is a rudimentary way of detecting the accuracy of a lane marking.

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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23. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

24. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

25. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akita in view of Sato (5,555,555).

26. In regards to claim 3, Akita as shown above, in response to claim 1, has everything in common with claim 3 except for explicitly stating that luminance-distribution characteristics are used in the determining parameters.

27. Akita refers to Sato's teaching on lane detection. Sato discloses, see the sentence starting at column 9, line 47, that luminance-distribution characteristics are used to identify lane markings.

28. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to use luminance-distribution (as taught by Sato) when analyzing lane detection and deviation. This technique is a relatively easy and cheap approach for detecting white lines, making the approach an ideal function for detecting lane markings.

Allowable Subject Matter

29. Claims 2 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

31. US Patent 05,410,346 provides a comprehensive review of the technology used in the application.

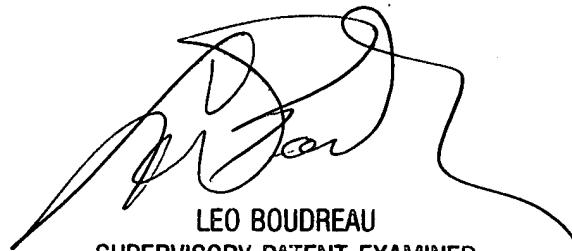
32. US Patent 05,955,941 provides another review of view fail safe systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher L Lavin whose telephone number is 703-306-4220. The examiner can normally be reached on M - F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau can be reached on (703)305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLL



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